

**CLAIMS**

1. A measuring system (1) for imaging the characteristics of an object (2) having at least a first (2a) and a second (2b) layer, which system (1) comprises at least one light source (3) arranged to illuminate the object (2) with incident light (4), an imaging sensor (6) arranged to detect reflected light (5b) from the object (2) and to convert the detected light into electrical charges and, means for creating a representation of the object (2) according to the electrical charges, **characterised in that** the system (1) comprises means for obtaining information on light scattered (5a) in the first layer (2a) and the second layer (2b) of the object (2) from the representation and, means for comparing the information to stored information in order to detect defects on the object (2).
2. A measuring system according to claim 1, **characterised in that** the measuring system (1) and/or the object (2) is/are arranged to move in relation to one another in a predefined direction of movement.
3. A measuring system according to claim 1, **characterised in that** the incident light (4) is arranged to have limited dispersion in a predefined direction.
4. A measuring system according to claim 3, **characterised in that** the incident light (4) is a linear light.
5. A measuring system according to claim 1, **characterised in that** the system further comprises means for obtaining information on the geometric profile of the object (2) from the representation.
6. A measuring system according to claim 5, **characterised in that** the system comprises means for obtaining information on the geometric profile of the first layer (2a) of the object (2) from the representation.
7. A measuring system according to claim 5, **characterised in that** the system comprises means for obtaining information on the geometric profile of the second layer (2b) of the object (2) from the representation.

8. A measuring system according to claim 1, **characterised in that** the light source (3) comprises a polarizer arranged to facilitate the distinction between light reflected on the object (2) and scattered light in the object (2).
- 5 9. A measuring system according to claim 1, **characterised in that** the first layer (2a) consist of a transparent or semi-transparent material.
- 10 10. A measuring system according to claim 1, **characterised in that** the object (2) is a package wrapped in a protective material.
- 10 11. A method for imaging the characteristics of an object having at least a first and a second layer by means of a measuring system, in which method the object is illuminated by means of incident light, and light reflected from the object is detected by means of an imaging sensor in which the detected light is converted into electrical charges, according to which a representation of the object is created, **characterised in that** information on light scattered in the first layer and the second layer of the object is obtained from the representation and that the information is compared to stored information in order to detect defects on the object.
- 15 12. A method according to claim 11, **characterised in that** the measuring system and/or the object is/are moved in relation to one another in a predefined direction of movement.
- 20 13. A method according to claim 11, **characterised in that** also information on the geometric profile of the object is obtained from the representation.
- 25 14. A method according to claim 13, **characterised in that** information on the geometric profile of the first layer of the object is obtained from the representation.
- 30 15. A method according to claim 13, **characterised in that** information on the geometric profile of the second layer of the object is obtained from the representation.
- 35 16. A method according to claim 11, **characterised in that** the incident light is polarized and that the polarized incident light is used to distinguish between reflected light on the object and scattered light in the object.